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ARTSE AMOT

WHAT IS CLAIMED IS:

1. An air filter having electromagnetic-energy absorptive characteristics, the filter comprising:

a porous substrate; and

an electrically absorptive material distributed substantially uniformly
through the porous substrate, said electrically absorptive material being an electrical
absorber in particulate form suspended in a binding agent.

2. cancelled

- 3. The air filter of claim 1, wherein the electrical absorber is selected from the group consisting of carbon, carbon particles, carbon fibers, alumina, sapphire, silica, titanium dioxide, ferrite, iron, iron silicide, graphite, and composites of iron, nickel and copper.
- 4. The air filter of claim 1, wherein the binding agent is selected from the group consisting of an elastomer, a rubber and an epoxy.
- 5. The air filter of claim 1, wherein the electrically absorptive material further comprises a highly conductive material.

- 6. The air filter of claim 5, wherein the highly conductive material is selected from the group consisting of copper and aluminum.
- 7. The air filter of claim 1, further comprising a fire-retardant layer.
- 8. The air filter of claim 7, wherein the fire-retardant layer comprises a fire retardant selected from the group consisting of phosphates and antimony trioxide.
- 9. The air filter of claim 7, wherein the fire-retardant-treated porous substrate passes a self-extinguishing vertical burn requirement in accordance with Underwriters Laboratories Standard 94.
- 10. The air filter of claim 1, wherein the porous substrate comprises an open-cell reticulated polyurethane foam.
- 11. The air filter of claim 10, wherein the foam comprises at least about 10 pores per linear inch.
- 12. The air filter of claim 1, wherein the porous substrate comprises a fiberglass mat.
- 13. The air filter of claim 1, wherein the porous substrate comprises a non-woven polyester web.

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- 14. The air filter of claim 1, further comprising an electrically conductive layer.
- 15. The air filter of claim 14, wherein said electrically conductive layer is an electrical conductor having an array of apertures through which air can flow.
- 16. The air filter of claim 14, wherein said electrically conductive layer is a conductive coating applied thereto.
- 17. The air filter of claim 14, wherein the electrically conductive layer comprises a honeycomb.
- 18. The air filter of claim 1, further comprising a frame fixedly attached to the porous substrate, wherein the frame provides physical support for the porous substrate.
- 19. The air filter of claim 1, wherein the porous substrate comprises a sheet having a thickness less than about 0.5 inches.
- 20. The air filter of claim 1, wherein the porous substrate provides at least 20 dB of attenuation to electromagnetic energy substantially occurring at frequencies at least between about 4 GHz and 18 GHz.
- 21. A method for producing an air filter having electromagnetic-energy-absorptive

